

INTEGRATED PORTABLE ULTRASOUND IMAGING SYSTEM
ABSTRACT OF THE DISCLOSURE

A multi-dimensional beamforming device that performs consecutive one-dimensional operations. For example, beamsteering for a two-dimensional array can be
5 include a projection of a beam onto each of the respective axes of the array. In such a device, a first beamforming processing element is used to form multiple beams for each array output along a given row. In a preferred embodiment, sequential output vectors from the first processing element are then applied to a transposing or corner turning memory and the data are reformatted such that all elements on a given column of the
10 array are applied to a second beam forming processing element.